

**ARCHITECTURE FOR LARGE OPTICAL FIBER ARRAY USING
STANDARD 1×2 COUPLERS**

Abstract of the Disclosure

Sensor arrays utilizing standard 1×2 couplers reduce the differences in the
5 returned optical power levels by appropriate selection of the coupling ratios. Preferred
embodiments are described that comprise 6 distribution fiber lines and 16 return fiber
lines. One embodiment includes 16 sensor groups in which each sensor group has a
dedicated return line. In another embodiment, 8 sensor groups are configured so that no
10 two adjacent sensors have either a common distribution fiber line or a common return
fiber line.

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